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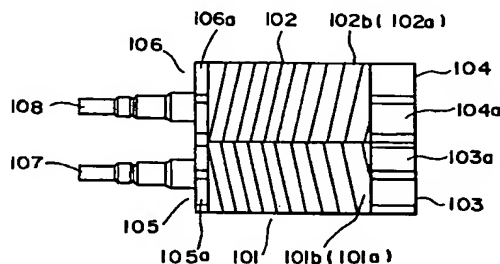
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(54) **Screw fluid machine and screw gear used in the same**

(57) In a screw fluid machine including male and female rotors which are engaged with each other, a casing for accommodating both the male and female rotors, fluid working rooms which are formed by the male and female rotors and the casing, and fluid inlet and outlet ports which are provided in the casing so as to intercommunicate with one end portion and the other end portion of the working rooms, the helix angle of the screw gear constituting each of the male and female rotors is set to be continuously varied in a helix advance direction. Further, the screw gear is designed so that the peripheral length of a pitch cylinder in a helix advance direction on a development of a tooth-trace rolling curve on the pitch cylinder of the screw gear can be expressed by a substantially monotonically increasing function.

Fig. 10



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